

Date: Fri, 22 Apr 94 04:30:03 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V94 #442  
To: Info-Hams

Info-Hams Digest                      Fri, 22 Apr 94                      Volume 94 : Issue 442

Today's Topics:

                    10m opening  
                    AR-Net - Amateur Radio Ne  
                    Dangerous RF/Microwave fields  
                    IPS Daily Report - 21 April 94  
            What's the best freq for underground radio?

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 20 Apr 1994 17:23:02 GMT  
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!geraldo.cc.utexas.edu!  
astro.as.utexas.edu!oo7@network.ucsd.edu  
Subject: 10m opening  
To: info-hams@ucsd.edu

thomasr@acpub.duke.edu (ronald Thomas) asks:

>I'm new, new, new to 10-meters so take this with a grain of salt!!  
>Yesterday afternoon and evening was the best activity I've heard for the  
>last month. Using a trimmed CB mag mount antenna on a steell filing  
>cabinet, I picked up Venezuela, Argentina, Monserat, California, Mexico,  
>Louisiana, and some others.

>I wonder how transient this opening is/will be.

After the activity of just a couple of years ago,

that is what old hands call a dead band...

Derek Wills (AA5BT, G3NMX)  
Department of Astronomy, University of Texas,  
Austin TX 78712. (512-471-1392)  
oo7@astro.as.utexas.edu

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Date: 21 Apr 94 03:35:00 GMT  
From: dog.ee.lbl.gov!agate!iat.holonet.net!wwwswinc!  
john.woodstock@ucbvax.berkeley.edu  
Subject: AR-Net - Amateur Radio Ne  
To: info-hams@ucsd.edu

VDDDDD?  
: 3  
GDDDD4 VDRD? VDD? VDRD? RDD? R B RDD?  
: 3 : : 3 GDD4 : GD : 3 GDBY  
P A P P A P A P PDDY SDDY P AD  
RDDDDD?  
: 3  
GDDDBDY VDD? DRDD? DRD VDD?  
: 3 GDD4 : 3 : : 3  
P ADD P A DPDDY DPD SDDY  
VDDD7 B  
: : 3  
: : 3 RDD? VDRD?  
: : 3 GD :  
P SDDY PDDY P

AmateurRadio Net (ARnet) is a net dedicated to Amateur Radio enthusiasts. If you are an Amateur Radio enthusiast, or any of your callers are, this is an echomail network for you. ARnet is replacing an older ham radio network that recently folded - RF-Net(tm).

If you would like to get more information about this net, please look for the information packet ARNET044.ZIP in any of 3 places:

- 1) Channel1  
SaltAir  
Mustang HQ BBS  
Execnet  
The Silicon Garden
- 2) Any of the 40+ member systems

3)               FREQ'd from 1:2619/211 using a magic name of ARNET

ARnet is available via QWK & FIDO. Some Hub slots are open, however many have been filled over the last 4-6 weeks.

If you have any questions, please contact me.

John Woodstock, N2HAA  
The Silicon Garden  
P.O. Box 436  
Coram, NY 11784  
BBS: 516-736-6662  
FIDO: 1:2619/211  
Internet: SysOp@woodybbs.com

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~ TXTBCST 1.3b: ARnet - Ham Radio Info Source

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Date: 20 Apr 94 03:44:55 GMT  
From: sfov1.verifone.com!verifone!steven\_h2@uunet.uu.net  
Subject: Dangerous RF/Microwave fields  
To: info-hams@ucsd.edu

Does anyone know what is considered dangerous RF and Microwave signals. Somehow I remember that between 100K and 30GHz your not suppose to expose human's to more than 194V/meter (the spec could have been either an ANSI, IEEE, or OSHA spec).

Anybody know if a spec exists detailing what RF and microwave field strengths and frequencies that are considered dangerous?

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Date: 21 Apr 94 23:10:53 GMT  
From: agate!howland.reston.ans.net!pipex!sunic!trane.uninett.no!nac.no!ifi.uio.no!wabbit.cc.uow.edu.au!metro!ipso!rwc@uchvax.berkeley.edu  
Subject: IPS Daily Report - 21 April 94  
To: info-hams@ucsd.edu

SUBJ: IPS DAILY SOLAR AND GEOPHYSICAL REPORT  
ISSUED AT 21/2330Z APRIL 1994 BY IPS RADIO AND SPACE SERVICES  
FROM THE REGIONAL WARNING CENTRE (RWC), SYDNEY.  
SUMMARY FOR 21 APRIL AND FORECAST UP TO 24 APRIL

No warning is current.

#### 1A. SOLAR SUMMARY

Activity: low

Flares: none.

Observed 10.7 cm flux/Equivalent Sunspot Number : 087/030

#### 1B. SOLAR FORECAST

	22 April	23 April	24 April
Activity	Low	Low	Very low
Fadeouts	None expected	None expected	None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number : 088/032

#### 1C. SOLAR COMMENT

A new solar region is showing growth.

#### 2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth: quiet to unsettled

Estimated Indices :	A	K	Observed A Index 20 April
Learmonth	10	3322 2232	
Fredericksburg	08		08
Planetary	07		10

Observed Kp for 20 April: 3333 2212

#### 2B. MAGNETIC FORECAST

DATE	Ap	CONDITIONS
22 Apr	10	Quiet to unsettled.
23 Apr	10	Quiet to unsettled.
24 Apr	10	Quiet to unsettled.

#### 2C. MAGNETIC COMMENT

None.

#### 3A. GLOBAL HF PROPAGATION SUMMARY

	LATITUDE BAND		
DATE	LOW	MIDDLE	HIGH
21 Apr	normal	normal	normal

PCA Event : None.

#### 3B. GLOBAL HF PROPAGATION FORECAST

	LATITUDE BAND		
DATE	LOW	MIDDLE	HIGH
22 Apr	normal	normal	fair
23 Apr	normal	normal	fair

24 Apr        normal                normal                fair

3C. GLOBAL HF PROPAGATION COMMENT

Conditions expected to remain normal until April 28.

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4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

MUFs at Sydney were near predicted monthly values

Observed T index for 21 April: 39

Predicted Monthly T Index for April is 40.

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

DATE    T-index    MUFs

22 Apr    40        Near predicted monthly values.

23 Apr    40        Near predicted monthly values.

24 Apr    40        Near predicted monthly values.

4C. AUSTRALIAN REGION COMMENT

None.

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IPS Regional Warning Centre, Sydney

email: rwc@ips.oz.au    fax: +61 2 4148331

RWC Duty Forecaster    tel: +61 2 4148329

Recorded Message        tel: +61 2 4148330

|IPS Radio and Space Services

|PO Box 5606

|West Chatswood NSW 2057

|AUSTRALIA

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Date: Wed, 20 Apr 1994 17:00:30 GMT

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!

usenet.ucs.indiana.edu!ucs.indiana.edu!reid@network.ucsd.edu

Subject: What's the best freq for underground radio?

To: info-hams@ucsd.edu

In article <supervisor.7.766696440@rose-hulman.edu> supervisor@rose-hulman.edu (EE DEPT NOVELL SUPERVISOR) writes:

>In article <Co9ont.E5n@ucdavis.edu> ez045506@dale.ucdavis.edu (Timothy McNulty) writes:

>>...

>>Any one have any experience with underground radio?

>

>

>>Timothy McNulty                                N6HFS                                tjmcnulty@ucdavis

>

>Tim

>    Many years ago Myself and members of the SISG Southern Indiana

>Speleo Group (non NSS) took the first magnetic cave mapper underground  
>under the direst of emergency situations. Two men drowned in Showfarm cave  
>in Indiana and we were in the rescue team. We both communicated to the  
>surface, CW, and mapped the underground passage with a 2Kc magnetic field.  
>This unit would work thru at least 400 feet of solid limestone.  
> Later Richard Blendz and members of the Bloomington Ind. Grotto NSS  
>Frank Reed, Dwight Hazen and others developed an Uppersideband 30Khz  
>transceiver system to talk and map to the surface. As K9CUN said there were  
>articles in the NSS news about this. Early 1970,s  
> Don't count on reflections in caves to propagate RF. Cave walls are  
>GREAT absorbers of rf. If we were going to be in a cave for days we would  
>run a fine (near invisable) wire from outside in the trees back thru the  
>cave to base camp. We could talk anywhere in the cave within site of the  
>wire and for a limited distance outside.  
> We did run tests on 80Meters between two caves once CW and heard  
>signals thru @ 1/2 mile of rock.  
>  
>73's Good hamming, Keep your head above water when underground!  
>Dave K9ZCE

Hi Dave!

I've been using "cave radio" since 1969. Mine uses 3.5 kHz CW. Most others use VLF below 10 kHz. British and Canadian rigs use SSB between 100 and 200 kHz. VHF doesn't work well in caves; line of sight + 20 feet is about all you can get, with a lot of dead spots. UHF propagates further than VHF in cave passages. A friend put the UHF antenna of his crossband-repeating rig in a cave (with about 100' of coax) and was able to communicate with the outside world from several hundred feet away. VHF works reasonably well in open-air pits. Circular polarization would probably help in any case.

Cave radio's most useful aspect is its direction-finding ability. It can find the surface location above the transmitter, within a few inches, and measure depth (+- 5%). Three entrances of the Mammoth Cave system in Kentucky were radiolocated.

I read an article in a British mining magazine about a repeater for mine-to-surface use; the underground part was a CB rig connected via a balun to a long piece of 300-ohm twin lead. It emitted and picked up RF by the "leaky feeder" effect. Special leaky coax is made for VHF/UHF systems installed in mines and subways (or use the crap that Radio Shack sells :-)

See \_73\_ magazine, February 1984, p. 42 for an article entitled "Cave Man Radio" (not the original title). There is a newsletter called \_Speleronics\_ which is about cave radio and other cave-related electronics. Several construction articles for cave radios have been published. E-mail for details. Don Lancaster mentioned it in his "Hardware Hacker" column and we

received some letters from nuts who thought "underground radio" meant clandestine broadcasting. ☆(:-)

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Frank Reid      reid@ucs.indiana.edu      W9MKV

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Date: 21 Apr 94 17:38:39 GMT  
From: dog.ee.lbl.gov!agate!kabuki.EECS.Berkeley.EDU!kennish@ucbvax.berkeley.edu  
To: info-hams@ucsd.edu

References <2o78j3\$o3q@apakabar.cc.columbia.edu>,  
<STEVE.94Apr19184558@hobbes.vigra.com>, <a10554.766918783@giant>≤  
Subject : Re: Kenwood TH-78A ☆OR☆ Yaesu FT-530

In article <a10554.766918783@giant>,  
David Tse <a10554@giant.rsoft.bc.ca> wrote:

>  
>Only diff. is the Kenwood can do AM in all VHF and UHF (may be not 800 band)  
>but Yaesu can only do it in the 110 to 138MHz?? (Mine Standard C550/C558A  
>can do AM on all VHF but not UHF.)

Not True. Although not documented, if you put a UHF frequency in the left side of the FT-530, and enable A3E mode, you will decode UHF frequencies in AM mode. Maybe not as convenient. Now, HOW they do A3E detection is a kludge. Look at the schizmos and take a look :-)

-ken

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End of Info-Hams Digest V94 #442

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